

A CATALOGUE OF EARLY INDIAN COINS

PART I



A CATALOGUE OF EARLY INDIAN COINS

IN THE

ASUTOSH MUSEUM

PART I

BY

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FOREWORD

Asutosh Museum of Indian Art was established by the University of Calcutta in 1937 in memory of Sir Asutosh Mookerjee, the great Indian educationist, to collect and preserve objects of Indian art and antiquity with special emphasis on the art of Bengal and Eastern India. Besides being a Museum of regional character, the Asutosh Museum is the first Indian University Museum. For the last twentyfive years it has also been performing almost all the functions of a State Museum, there being no State Museum in West Bengal so far.

Its activities in the field include regular archaeological excavation and exploration in different regions of West Bengal and adjoining states of Eastern India, which have led to the discovery of more than a dozen unknown antiquarian sites between the Pre-historic and mediaeval times, as also Rural Culture Survey of contemporary traditional arts and crafts of Eastern India.

Mainly acquired through gift, excavation and exploration, the total Museum coin collection of about 3,000 specimens, of which this catalogue indeed is the first part of the contemplated series, contains some interesting and unique examples. Enriched by donation of collections of R. D. Banerji, D. R. Bhandarkar, K. N. Dikshit and P. C. Nahar, ancient Indian coins consist of 10 bent-bar and minute silver, 150 punch-marked silver and copper, 300 cast copper, 25 tribal and local, 100 Greek, Saka-Parthian and Kushana, 25 Gupta gold and silver, 100 dynastic and 200 unattributed types. Besides this mention may be made of about 2000 coins of Muslim and late-mediaeval origin in the Museum Coin Cabinet.

7th August, 1962

D. P. GHOSH



PREFACE

A small but representative collection of Ancient Indian Coins in the Asutosh Museum of Indian Art, University of Calcutta, had long been sealed from appraisement for want of a Catalogue. With the growth of activities of the Museum, the collection was so quickly enriched by the addition of some interesting and unknown types that the publication of a comprehensive catalogue was keenly felt, and I was entrusted with the responsibility. The present volume, being the Part I of the proposed Catalogue, describes the Early Indian Coins in the Museum collection up to circa third century A.D. A critical analysis of the coins covering the more important aspects of the new and rare types has been made in the Introduction.

For whatever the merits or otherwise of this small technical work I must be held responsible, but I must at the same time acknowledge with thanks and gratitude the kind help and co-operation I have received from the authorities and members of the staff of the Museum, and my teachers and friends.

Asutosh Museum, University of Calcutta, April 15, 1962 Chittaranjan Roy Choudhury



CONTENTS

							PAGE
Foreword				**			v
PREFACE	49						vii
CONTENTS					***		ix
LIST OF PLATES		•					xi
ABBREVIATIONS							xiii
TABLET TATAL			- 14:# - 13:4:#		**	••	XIII
INTRODUCTIO	ON						
I : Early Single	Type Silver C	Coins					xv
II : Punch-Mark	red Coins						xvii
		200 March					
III: Uninscribed	Cast Copper	Coins		**	***	**	xxiv
IV: Tribal and L	Local Coins		**		2.5		xxvi
			13.				
CATALOGUE (OF COINS				•		
I : Early Single	Type Silver Co	oins	*.*		**	**	1-2
Bent-Bar Silve	er Coins		**				1
Minute Single	Type Silver	Coins		**	**		1
II : Punch-Marke	ed Coins		**	**			3—25
Punch-Marke	d Silver Coins			•			3
Punch-Marke	d Billon Coin	s	100	**			22
Panch-Marke	d Copper Coi	ns					24
							26-40
III: Uninscribed (Cast Copper C	oins		**		**	.0-40

CONTENTS

							PAGE •
IV: Tribal an	d Local Co	ins	••	24	44	v. 4	1-44
Kuṇinda		144			144	**	41
Taxila		9.91		25.5	**	**	42
Yaudhey	a	3.5	**	**	15.5		43
Additions	**	**			**		45
Tunev							46



LIST OF PLATES

- Obverse Marks on the Early Single Type Silver Coins—Obverse Marks on the Punch-marked Silver Coins.
- II. Obverse Marks on the Punch-marked Silver Coins.
- III. Reverse Marks on the Punch-marked Silver Coins—Obverse & Reverse Marks on the Punch-marked Billon & Copper Coins—Obverse & Reverse Marks on the Cast Copper Coins—Obverse & Reverse Marks on the Local & Tribal Coins.
- IV. Obverse & Reverse Marks on the Local & Tribal Coins—Early Single Type Silver Coins: Bent-bars & Minute Silvers—Punch-marked Silver Coins.
 - V. Punch-marked Silver Coins.
- VI. Punch-marked Silver Coins.
- VII. Punch-marked Silver Coins.
- VIII. Punch-marked Silver Coins—Punch-marked Billon & Copper Coins & Enlarged Photographs of a Ship Type Coin & a Terracotta Sealing from Chandraketugarh.
 - IX. Cast Copper Coins.
 - X. Tribal & Local Coins—The Diagonal Scale—Additions: Photographs of the newly acquired well-preserved Ship Type Coin.

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ABBREVIATIONS

AA Ariana Antiqua.
AI Ancient India.

AIN Ancient Indian Numismatics.

AIW Ancient Indian Weights.

ASIAR Archaeological Survey of India:

ASIR Annual Report.

ASR

BBA Beginnings of Buddhist Art.

CAI Coins of Ancient India.

CCAIBM Catalogue of Coins of Ancient India in the British Museum.

CCIM Catalogue of Coins in the Indian Museum.

CL Carmichael Lectures.

EB. AM Excavations at Bangarh. Asutosh Museum-Memoir.

EK Excavations at Kausambi.

IA-R Indian Archaeology—a Review.
IG Imperial Gazetteer of India.

JA Journal Asiatique.

JASB Journal of the Asiatic Society of Bengal.

JNSI Journal of the Numismatic Society of India.

JRAS Journal of the Royal Asiatic Society:

JRAS. Cent. Suplt Centenary Supplement.

MASI Memoirs of the Archaeological Survey of India.

Num. Sup. Numismatic Supplement to the Journal of the Asiatic Society

of Bengal.

Pl Plate.

RKE Report on Kumrahar Excavations.

SBE Sacred Books of the East.

Var. Variety.

INTRODUCTION

I

EARLY SINGLE TYPE SILVER COINS

BENT-BAR SILVER COINS (p. 1). Four specimens of bent-bar silver coins from the vicinity of the Bhir mound, Taxila, are given the first place in the Catalogue (p. 1, nos. 1-4). These thick, slightly bent silver specie, stamped with six-armed mark on their concave side, twice on the larger denominations and once on the others, are found mainly in Taxila and its environs¹. The heavier pieces of them weigh as much as 175 grains or so, and the smallers vary from 43-50 to 19-0 grains. The reverse of all the bent-bar coins is blank, and most of the larger coins are countermarked by a comparatively smaller punch on the obverse between the larger stamps.

The coins are distinguished from the well-known punch-marked series by the fact that they are stamped only by a single type of mark, several variants of which are, however, known. The type, probably to be connected with those of the punchmarked coins, consists of six small circles inserted individually to the same number of bars round a central circle, from which an extra bar also projects. We have still to account for the significance of this type of mark, although attempts have been made to explain it from different angles2. The technique of manufacture of the bent-bar coins also seems to have been somewhat different from that of the punch-marked. The bars appear to be strips cut from oblong ingots, adjusted to required weight by clipping, and stamped. "Experiment has shown that the curvature is due to their having been struck while hot on a wooden anvil. . . The faces of the dies were circular and convex, thus producing a concave incuse and accentuating the curvature at the ends of the coins3." Excepting a few, the dies are substantially wider than the bars on which they are stamped, so that the complete mark is never impressed. It is likely that the bars were originally taken of uniform dimension as the die when stamped and the mark was present. But the necessity of obtaining coins of the correct weight further reduced the width of the faces of the bars by clipping afresh from their sides after striking, with the result that parts of the mark were also lost. The few coins that seem to be uniformly wide as the marks probably represent the remainder pieces or those that were adjusted to weight by clipping from the ends.

A fairly large number of bent-bar coins are now known. Allan maintains that these represent double Sigloi pieces, and their lower denominations. The Siglos denotes a Achaemenid Persian silver money the standard weight of which is about 86.46 grains troy. The assumption is based on the fact that these coins, which are of

¹ ASR, 1912-13, p. 42; 1919-20, p. 23; 1920-21, pp. 21-22; 1924-25, pp. 47-48; MASI, No. 59, pp. 1-3, 100, Pl. IV, 1-33; CCIM, Vol. I, p. 136, nos. 4-6 & Supplementary Catalogue, p. 8, nos. 127-32; CCALBM, pp. XV-VI. 1-2, Pl. I. nos. 1-6; AI, No. I, pp. 27-32, Pl. V, nos. 1-18.

³ E. H. C. Walsh, MASI. No. 59, p. 2; G. M. Young, AI. No. 1, pp. 29-30.

³ G. M. Young, op. cit., p. 29.

^{*} J. Allan, CCAIBM, p. XVI. *

INTRODUCTION

known provenance, come from the area over which Persian influence once extended.*

But the character and technique of the bent-bar coins are entirely Indian, and the heaviest of these usually weigh several grains more than the full weight of a double Sigloi. Moreover, no Siglos type Indian coin has so far been known. A more plausible suggestion would be that they are the ancient *Satamānas*, and their fractions, mentioned in some early Indian texts⁶, the unit of measure being a *rati*, and the weight of one hundred such units would be about 175-180 grains. One remarkable feature about the bar coins is, that like the punch-marked series, they show no signs of evolution, neither in their type nor in fabric. The view that the coins consist of both the older and later varieties may, therefore, be rejected.

From their archaic character and provenance the bent-bars appear to have been among the earliest coins of India, and along with a few other silver types, were current in parts of North and North West India for a time before the dawn of the third century B.C. Assuming that Curtius's account is based on fact, the present of 80 talents of stamped silver made by Omphis to Alexander in 326 B.C., might have consisted of bar coins. The hoard discovered in the Bhir mound in 1924 with a fresh coin of Philip Aridaeus is already dated to about 317 B.C. The find of punch-marked coins in another part of the mound in 1912, and dated by a coin of Diodotos to about 248 B.C., contained no bar coins. There is no evidence that they continued beyond the fourth century B.C. or existed in Mauryan Taxila.

The Museum specimens are well-preserved, and of them two varieties are to be distinguished. Var. a consists of the common larger coins (nos. 1-2), stamped with mark 1a (Pl. I) on either end of the concave obverse, and countermarked by 1b (Pl.1) in the centre. The coins of var. b (nos. 3-4) are stamped with mark 2 (Pl. I), a variant of 1a, and belong to a lower denomination. These are smaller in size, and represent a very rare variety, only two more specimens being known from the British Museum collections.

MINUTE SINGLE TYPE SILVER COINS (pp. 1-2). Another interesting series of early single type silver currency is suggested by six very small, round silver coins in the Museum (pp. 1-2. nos. 5-10). The provenance of these coins also is one of the early city sites of ancient Taxila. Each of them approximates '20 inch in size, and weighs about 3:50 grains. The minute coins are neatly stamped by mark 3 (Pl. 1) on one side, and blank on the reverse. Their technique of manufacture is apparent—small globules of silver stamped by hammer and anvil process. But for the small size of the coins only a portion of the mark appear on the flan. Several variants of the mark also may be distinguished.

A few small silver coins of similar type and fabric, found from Uttar-prodesh and at Thathari in Madhya-prodesh, are now in the British Museum⁹, and seventynine

^{*} Ibid.

^{*} Satapatha Brāhmaņa, V. 5. 5. 16 etc. D. R. Bhandarkar, CL. 1921, pp. 56-58.

^{*} G. M. Young, op. cit., pp. 30-31.

^{*} J. Al'an, op. cit., p. 2. nos. 10-11. Pl. 1. 4-5.

^{*} J. Allan, op. cit., pp. LII. LXIX. 286-7, Pl. XVI. 18-19.



more of them are also known from the Bhir mound hoard of 1924¹⁰. The fact that these tiny coins bear the six-armed mark characteristic of the punch-marked type, has led scholars to attribute them to that coinage¹¹. But unlike the bent-bar coins these are also stamped by a single type of mark, and, therefore, may conveniently be linked with the various early single type silvers. The findspots of the coins, however, suggest that they had a wider circulation than the bent-bars from Taxila.

The coins represent the lightest and smallest among the known silver coins of ancient India. Smriti writers and some ancient texts seem to lay down the māsha, weighing two ratis, being equivalent to 3.66 grains troy, as the lowest unit or form of some type of indigenous silver coins¹². The coins of the present type resemble no less in weight and size with the māshas, but they differ much in type and technique as well, so that their identity, as suggested by Walsh, is very doubtful¹³. While it is difficult to find their reference in literature, the general type of the coins and their association with the bent-bars and the punch-marked series suggest that they belonged to a date not later than the fourth century B.C.

¹⁰ ASR, 1924-25, pp. 47-48; MASI, No. 59, pp. 3-4, 101, Pl. V. 34-112.

¹⁷ J. Allan, op. cit., pp. LXIX. 286-7; E. H. C. Walsh, op. cit., p. 4.

¹² L. D. Barnett, Antiquities of India, p. 207; R. Shamasastry, Kautilya's Arthaidistra (Translation), p. 127.

¹³ E. H. C. Walsh, op. cit., p. 3. *

PUNCH-MARKED COINS

Side by side and contemporary to the early single type silver coins from Taxila and its environs, was current, throughout India, a peculiar and more interesting type of bimetallic money to which the name punch-marked has been given by general consent. It was coined both in silver and in inferior metals, namely, copper and billon, the latter being an alloy. The term used in naming these coins is based on the technique of manufacturing them. Flans were cut out into regular or irregular bits of different shapes and sizes from flattened sheets of metal, adjusted to the required ratio of weights by clipping, and then punched with various marks, each separately with individual dies, by hammer and anvil process on their obverse and reverse. Sometimes globules of metal were flattened and then stamped.

This method of manufacturing coins in the early part of our period appears to have had nothing in common with the Babylonian, Persian or Greek numismatic technique2. The useful methodewas thought of in this country quite independently without any foreign influence. In fact, the political as well as the socio-economic condition of India at the beginning of the sixth century B.C. was favourable enough to the growth of metallic currency. Archaeological and literary sources conclusively prove that various types of specie were in circulation in different parts of the country long before Alexander's march into India. Curtius informs us that the king of Taxila presented to the Macedonian monarch eighty talents of signati argenti, i.e., coined silver pieces, as a symbol of his friendship and allegiance. These have often been identified as the silver punch-marked coins3. Plastic forms of coins of various shapes and sizes, represented in such early monuments as Bharhut, Bodhgaya and Besnagar, which depict the reminiscence of the days of Buddha down to the close of the Sunga period, prove that the natives were quite familiar with their use as early as sixth century B.C. Our old literature seems to know of the coinage even before this date. That Pāṇini knew coined money is clearly indicated by one of his sūtras4. The Sāmanta-pāsādikā while explaining a verse from Patimokkha says about kārshāpaņa as, tattha kāhapaņo ti: suvannamayo vā rūpiyamayo vā pakatiko vā, here kārshāpaņa is either made of gold, or made of silver, or the ordinary one5. The kārshāpana as the medium of ex-

¹ As silver is not found in India, it seems to have been imported from the West, and probably in the form of beaten-out sheets, as Jeremiah (c. 629 B.C.) says that silver spread into plates is brought from Tarshish. Cf. Jeremish X, v. 9; A. Cunningham, CAI, p. 6. It seems probable that this form of the imported silver may largely account for most of the shapes of this coinage. As regards the art of punching, the coins would appear to have been stamped in the metal when heated as the marks on them are in relief on a sunken incuse.

For the foreight origin theories and the arguments against them cf., J. Prinsep, JASB. I, p. 394 & IV, p. 626; H. H. Wilson, AA, p. 404; J. Kennedy, JRAS. 1898, pp. 279ff.; V. A. Smith, JG. II, p. 135; J. Allan op. cit., p. LXXI; M. J. A. Decourdemanche, JA. 1912, pp. 117ff.; D. R. Bhandarkar, CL, 1921, pp. 37 ff. & 118-22.

² V. A. Smith, op. cit., p. 135; E. Thomas, AIW, p. 43.

^{*} Cf. V. 2, 119, τάρᾶd ἄhata . . . where he says, the word τάργα, is in the sense of struck (άhata), * derived from τάρα, i.e. form or shape, with the taddhita affix, γα, here implying possession when τάργα would literarily mean, struck money having a form.

^a D. R. Bhandarkar, op. cit., p. 81; E. Thomas, op. cit., p. 42. fn. 2.



change was the oldest and the most common, and became in course of time the generic expression for coined money of all metal based upon different standards peculiar to precious metals⁶. When the early alien rulers, the Greeks, the Scythians and others, issued their own coins in India, the indigenous money, especially the silver types, came to be specified by early Indian authors as purāṇas, i.e., oldlings, also called the dharaṇas, in order to distinguish them from the coinage of the foreigners⁷. Old smṛiti writers like Manu and Yājñavalkya lay down the weight of the silver purāṇas or dharaṇas at 32 ratis, being equivalent to about 56 grains troy. It is curious to note that the punch-marked silvers usually weigh between 50 and 60 grains which approximates the academic weight of the purāṇas or dharaṇas laid down in the śāstras.

The punch-marked coins are far from being a primitive type of money. The characteristic of these early coins is that they bear no legend from which can be traced their issuers. But there is little doubt that the marks on them were struck by a central authority that stood for the correctness of their weight and the genuineness of the metal. Systematic studies of several hoards of these coins, the provenance of which are correctly known, have led scholars to assert it8. The old view that the punchmarked coinage was a private money, issued by guilds and silversmiths with the sanction of the ruling authority, and the marks on them being those by different hands, stamped for their quick identification on different occasions, is no longer tenable. The wide distribution of the punch-marked coins and the close similarity of their general features have led scholars to opine that they were issued when the greater part of India was unified under one rule. Allan maintains that the Nandas were the first Indian monarchs to introduce metallic currency into the country, and that the tradition of their great wealth owes its origin to their having been the first to issue coins on a large scale¹⁰. A political unification in India as it may be said to have happened for the first time, in the remote historical period, is, however, indicated during the rule of the imperial Mauryas. And it is interesting to note that the greater number of hoards of the punch-marked coins, of almost identical composition, have come from Mauryan levels from everywhere that was within their vast empire11. The Bhir mound hoard of 1924 from Taxila of the early indigenous coins, comprising bent-bars, punch-marked and the minute silvers, have been dated by two gold coins of Alexander the Great and one of Philip Aridaeus, in mint condition, at about 317 B.C.12 It may, therefore, be argued that these early coins were in circulation, if not originated, in the Taxila region from a date much earlier than the Mauryas came to power. The great Mauryas in their turn continued to issue money on the existing types, particularly the punch-marked series, and disseminated them in their vast empire.

Manu and Yājňavalkya lay down that the term kārshāpana signified only copper coins of the weight of one kārshā (kārshāpanastu vijňevas-tāmrikah kārshikah panah, Manu. VIII. 136). But it is possible as has been shown by some that the term also designated coins of other metals, viz., gold or silver. Cf. D. R. Bhandarkar, op. cit., pp. 81 ff.

⁷ Cf. Manu, VIII. 131, ff.; A Cunningham, op. cit., pp. 47-54.

^{*} D. B. Spooner, ASIAR. 195-06, p. 153; JRAS. Cent. Suplt. 1924, p. 175; J. Allan, op. cit., pp. XIX & LXXI-XII; E. H. C. Walsh, op. cit., pp. 4 ff.

^{**} V. A. Smith, op. cit., p. 133.

¹⁰ J. Allan, op. cit., p. LXXI.

¹¹ J. Allan, op. cit., pp. LVI ff.

¹⁸ ASR, 1924-25, pp. 47-48; J. Alian, op. cit., pp. LVI-LVII; E. H. C. Walsh, op. cit., p. 1,

INTRODUCTION

The oldest of the punch-marked coins appear to have been made long before the end of the fourth century B.C., and as the foregoing discussion would show, they may conveniently be placed to about sixth century B.C. But the remarkable feature about them that they show no signs of evolution, neither in their types nor in technique and fabric, as also the similarity in constitution of most of their hoards, indicate that the coinage did not exist over a very long time. This is also indicated by the rapidity with which several types of coins that originated in some parts of Northern and Central India, with devices and legends struck at a time by a single die, ousted the punch-marked series from the very beginning of the second century B.C. and thence-forward. In the far interior regions of Central and Southern India, immune from foreign influence till a comparatively late period, the punch-marked coins seem to have survived even beyond the second century B.C.¹³

The most interesting but at the same time perplexing characteristic of the punchmarked coinage is the marks on them. It is the marks, stamped on the obverse and
the reverse of the coins, that constitute the coinage¹⁴. These are always beautifully
executed in relief on a sunken incuse, and neat pieces of small engravings in the round.
It is difficult to suggest any convincing explanation of them in the present state of our
knowledge although attempts have been made by some scholars to recognize in them
symbolisms, and by others religious or cult significances¹⁵. "Many of them are,"
however, "readily recognizable, and it is only lack of material for comparison that
prevents us identifying many of the others... They are drawn mainly from the
animal and plant world, or are combinations of symbols the meaning of which we do
not know.¹⁶"

The coins usually bear a group of five distinct marks on the obverse which are not always identical. Of the five marks two are almost invariably the marks 1 and 2a (Pl. I) or any of the variants of the latter. A large number of coins have plain reverse, others bear one to four comparatively smaller marks, and with very few exceptions the marks found on the obverse do not occur on the reverse, and vice versa. Some of the silver specimens are punched with a group of five marks on either of their sides and are commonly known as double-obverse coins. The theory that the variety represents an older coinage, subsequently restamped, is least convincing¹⁷. The remarkable feature about the double-obverse coins too, like that of the punch-marked coinage, is that irrespective of their thick or thin fabric, they show no signs of evolution. The double-obverse coins appear to be proof-pieces, struck immediately preceding the minting of more than one variety of coins at a time, as well accepted in the circulation along with the minted pieces.

The greater number of the punch-marked coins that have been known are in

¹³ Nārada Smriti. Mpp. 57; SBE, Vol. XXXIII, p. 231.

¹⁴ Cf. rūpam chhinditvā kata māsako, or rūpam sāmutthpetvā kata māsako, used by the Commentary Sāmanta-pāsādikā on the Nisaggiya-pāchitiya. 2.; D. R. Bhandarkar. Excavations at Besnagar, ASIR. 1913-14, p. 210.

¹⁵ A. Foucher, BBA, pp. 14 & 21. Pl. I; Durga Prasad, Num. Sup. XLV, pp. 317 ff.; E. M. C. Walsh, op. cit., pp. 5-28; JNSI, Vol. II, pp. 21-23; Vol. III, pp. 2-5; P. L. Gupta, JNSI, vol. VIII, pt. II, pp. 122-23; Vol. XII. Pt. II, pp. 136-38; V. A. Smith, CCIM. Vol. I, p. 131.

¹⁴ J. Allan, op. cit., pp. XXI-II.

¹⁷ E. H. C. Walsh, op. cit., p. 11; JNSI, Vol. III, p. 4,



silver. The copper and billon coins are exceedingly rare, and the area of their circulation was much smaller than the punch-marked silvers. This is clearly indicated by the nature of different finds as also the collections of these coins. Of the copper series there are only 217 coins in the British Museum of unknown provenance from U.P.,18 54 in the Indian Museum from Madhyapur in the Bhagalpur district of Bihar,19 and 21 in the Asutosh Museum from Chandraketugarh in 24-Parganas, Bengal.20 The billon coins seem to be known only from 21 specimens in the collection of the Asutosh Museum from Bangarh in West Dinajpur, Harinarayanpur and Chandraketugarh in 24-Parganas, Bengal.21 The inferior metal coins usually weigh between 350 and 10 grains, which is a wider range than that of their silver counterparts. Those of the coppers which weigh as much as 350 grains or so are very thick and of heavy fabric, and apparently belong to a higher denomination. Several lower denominations of the coins are also known from the lighter pieces. Our literary sources seem to lay down various standards of weight for the kārshāpaņas, a generic term for metal currencies of ancient India which included also the copper and coins of other metals.22

The extreme paucity of the cheap metal punch-marked coins as also the limited extent of their dissemination leave scope to conjecture some reasons. The coins were evidently manufactured to facilitate fractional transactions and they seem to have reached the minute fractions of some of the traditional standards. The market for this type of money in an ancient period obviously was in a centre of brisk trade and commerce as we find it even this day. This view may be substantiated by the fact that the punch-marked coins are mainly found in what were in ancient times the most important and thickly populated parts of India. The findspots of the punchmarked copper and billon coins which are mostly on the Gangetic valley, dotted with centres of ancient civilizations, have also established their past glory and richness in commerce from literary sources and recent archaeological investigations. This does not necessarily attribute the coins to any of the localities from which they come. It is likely that after they were minted by the central authority the coins went straight to their markets to cope with the demand arising out of transactions. But they do not seem to have ever moved out of the business cycle or from their centres of activity, and one does not expect base metal coins to travel far from their places of circulation.

The large number of punch-marked coins in the collection of the Asutosh Museum that have been catalogued here comprise of silver, billon and copper examples. Apart from a few that are known from different ancient sites of India the majority of them have been acquired either through scientific explorations or from stratified layers, datable between the sixth and third centuries B.C., in the process of archaeological diggings at Bangarh and Chandraketugarh, Bengal²³. The chronological and numismatic importance of these coins, therefore, is beyond any question. The collection

¹⁸ J. Allan, op. cit., pp. LXXVIII & 101-16. Pl. XII, 11-17 & XIII, 1-14.

¹⁹ ASR, 1925-26, p. 154, Pl. LX. fig. 7; J. Allan, op. cit., p. LXXIX.

^{**} LA-R, 1959-60, pp. 51 & 78.

¹¹ K. G. Goswami, EB. AM. No. 1, p. 31. Pl. XXIV. 15-16; IA-R, 1957-58, p. 51.

¹¹ See p. VII. fn. 6 supra.

¹³ K. G. Goswami, op. cit., pp. 31 ff.; IA-R, 1956-57, pp. 30 & 73; 1957-58, pp. 51 & 70; 1958-59, pp. 56 & 77; 1959-60, pp. 51 & 78; 1960-61, pp. 39ff..

INTRODUCTION

of punch-marked silver coins seems on the whole to be the representative one, as the known published specimens are well represented. The billon and copper coins which are known for the first time from the Museum specimens exhibit unique varieties.

PUNCH-MARKED SILVER COINS (pp. 3-21). The coins, like many others, are either square or round in shape, and belong both to the thick and thin fabrics, irrespective of their forms. They are for the most part well-preserved, only a few being slightly worn, probably because they continued to be in the circulation for a considerable period of time. The well-preserved specimens usually weigh between 46 and 53-50 grains.

The coins have been arranged in twenty-six classes. Class I is composed of the double-obverse coins, arranged under several groups and varieties according to the composition of the marks on either of their sides (pp. 3-6. Pl. IV & V. 1-15). There are sixteen double-obverse pieces in the Museum against sixty-five already known from the Bhir mound hoard of 1924²³ and six in the Paila hoard²⁵. Classes II to XXVI are formed with the coins characterised by the same group of obverse marks for each class. These are again divided into groups within which the same marks recur, but usually have each a mark or two peculiar to them. The varieties are the individual issues within a group, distinguished by the variations of the type and number of reverse marks. The coins of these classes bear a group of five marks on the obverse, only a few of them being countermarked by a sixth. As in the case of other collections, the number of different obverse marks and their variants on the present coins are very great, but they do not display any unknown mark.

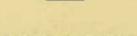
PUNCH-MARKED BILLON COINS (pp. 22-24). The punch-marked billon coins are known for the first time from the Museum specimens. Their provenances have already been referred to and we have no evidence that they have come from outside Bengal. The coins are of neat and fine fabric, and weigh between 51-75 and 11-0 grains. They bear a group of three or four marks on the obverse, and usually are blank on the reverse. Of them both round and square shapes may be distinguished. They fall into three distinct classes.

The coins of class II and III are round and of fine fabric, and belong to the lesser weights. The group of four marks that constitute each of the obverse of the two classes of coins are nos. 5. 6. 7. 8 and 5. 9. 10. and an illegible punch, respectively (Pl. III). The shape and fabric of the coins of class I are the same as those of the punch-marked silvers, and weigh between 45 and 51.75 grains which as well approximate the weight of the silver series. The six coins which constitute the class were recovered from Bangarh, Harinarayanpur and Chandraketugarh, Bengal, through archaeological methods. The obverse of the coins bear marks 1. 2. and 3 (Pl. III). The very fact that they have only three marks on them, as also the group which the marks compose, is interesting. Mark I may conveniently be identified as the representation of a ship, which is, however, mistaken as a bag.26 It is single decked, the rear part of which delineates the form of that of a dolphin, with a full treatment of its snout in the front,

²⁴ E. H. C. Walsh, op. cit., pp. 10-12.

¹⁵ JNSI, Vol. II, p. 24.

²⁸ K. G. Goswami, op. cit., p. 31.



INTRODUCTION

The form of the ship is evidently archaic and unrivalled, as it has no parallel in the repertory of the ship-motifs of ancient India. Attention may be drawn in this connection to a terracotta sealing (Pl. VIII) belonging to the same period from Chandraketugarh bearing a ship-motif which is, however, not identical with that on the coins. The coinage, it may be assumed, besides its usual sphere of activity in the contemporary money market also is indicative of the sea and riverine commerce of India in the pre-Christian days.²⁷

PUNCH-MARKED COPPER COINS (pp. 24-25). In type and fabric, the copper coins of the Museum collection, are replicas of the silver series. The obverse and reverse marks on the punch-marked silvers are common on them (Cf. Pl. III). But the weight of these coins shows that they belong to the lower denomination series, probably the halves of the 32 rati standard. They are, for the most part, extremely corroded, probably because of the excessive salinity of the soil of their findspot.

The Museum specimens of these coins fall into a single class and of them two varieties are to be distinguished. The coins of variety a bear marks 3. 4. 5. 6 and an illegible punch, possibly mark 7 (Pl. III) on the obverse and a plain reverse. Those of variety b have the same obverse as on the coins of variety a, but with reverse bearing marks 12 and 13 (Pl. III).

UNINSCRIBED CAST COPPER COINS

Like other types of ancient Indian coinage, a study of the early indigenous money classed as uninscribed cast copper coins is vitiated for lack of sufficient archaeological data and information from literary sources of old. Attentions have no doubt been devoted by scholars to the finds or to the haphazard collections of these pieces, but have not been able to assess the coinage with proper significances. Investigations show that the coins were manufactured, more than one at a time, by pouring molten metal into hollow earthen moulds containing sections, and also bearing various devices within that were to be impressed on their sides. This was no doubt a welcome technique for a large scale coinage from a comparatively cheap metal in the early part of our periods. The characteristic of the early cast coppers is that like the punch-marked series, they bear no legend from which can be inferred the names and character of their issuers. There is, therefore, little to assist in attributing them.

The cast copper coins, equally numerous as the punch-marked silvers, though not so varied, belong to various shapes and sizes, and weigh over a wide range, between 144.50 and 20 grains: the majority, however, ranging between 30 and 60 grains. We cannot, from these weights, fix their denomonations with certainty, as also with any of the copper types mentioned in our old literature. Some of them were probably kārshāpaṇas, and their lower forms.²

The cast coppers are usually found associated with the punch-marked silver coins and in the sites which yield only the latter type.³ The evidence then suggests that they are probably of the same period. The area of their circulation was, to some extent, limited than that of the punch-marked silvers, but it was much wider than Allan has suggested.⁴ We have no recorded provenance of these coins from the North-West or the South of India. Recent archaeological investigations and the collection of these coins in the Asutosh Museum, however, show that they are also known from Bihar and Bengal in Eastern India.⁵

The uninscribed cast copper coins in the Museum (pp. 26-40) have been recovered from datable stratums mainly through archaeological methods from Bangarh, Harinarayanpur and Chandraketugarh (Bengal), as also the few that are from the well-known ancient sites of Kausambi (U.P.), Rajgir and Patna (Bihar). Besides their significance for provenance, the coins which fall into six well-marked classes, include some new varieties that are of special numismatic interest.

¹ S. K. Chakrabortty, AIN, pp. 109-110 & ff.

² The term kārsiltīpana denoted in a general way gold, silver and copper coins. The copper variety, according to our sources, weigh 80 ratis, being equivalent to 146'4 grains troy. Cf. D. R. Bhandarkar, op. cit., pp. 80 ff.

² ASR, XXII, p. 114; XI, p. 25; ASR, 1913-14, p. 210; K. G. Goswami, op. cit., p. 32. Pl. XXIV. 3-12; LA-R, 1956-57, pp. 30 & 73; 1957-58, p. 70; 1958-59, pp. 56 & 77; 1959-60, pp. 51 & 78; 1960-61, p. 39; G. R. Sharma, EK. 1957-59, pp. 82 ff.; A. S. Altekar & V. Mishra, RKE, 1951-55, pp. 92 ff.

^{*} J. Allan, op. cit. pp. LXXVI-VII.

K. G. Goswami, op. cit.; IA-R, op. cit..

^{*} Ibid.



INTRODUCTION

The coins of class IV, V and VI (nos. 61-83, 84-222 & 223-258) represent the commonest cast copper pieces of ancient India. They have a strong family resemblance, but distinct groups have been preferred. Vars. a and b of class III (nos. 17-53 & 54-60) are closely connected. The coins of the former variety of this class are often found in pairs, as they were originally cast together in batches; on many others can be traced where they were broken from the mould and the adjoining pieces. The coins of class I and II (nos. 1-12 & 13-16) are exceedingly rare, as they seem to be known only from the specimens in the Museum. Their provenance is Harinarayanpur, Bengal, but for that cannot be attributed to the locality with certainty. The group of marks Ia. 4. 5. 8 and 2. 3. 7 (Pl. III) occurring respectively on the obverse and reverse of the coins of class I, are common to several other series of cast coins. But the type, as also the fabric of the coins are new. Mark 9 (Pl. III) on var. a and mark 1c (Pl. III) on var. b of the coins of class II, are, but uncommon. The coins of var. b, of the same size and fabric as that of the square coins of common cast series, with a plain reverse, has one of the most remarkable types in the ancient Indian coinage -an elephant, standing, facing within a torana. Apart from the symbolisms that would be readily recognized from the type, the coins possibly bear the earliest numismatic reference of a secular architecture of ancient India-a gateway, parallel of which does not seem to be known from any other source of contemporary India.

TRIBAL AND LOCAL COINS

The tribal and local coins of our period in the collection of the Museum, large number of which have been recovered in distinct groups from the length and breadth of Northern, Central and North-Western India, characterised by perplexing types and fabrics, are exceedingly small. The few coins of the common varieties of the coinages of the Kunindas, Yaudheyas and from Taxila of which the collection constitutes have, however, been included in the catalogue (pp. 41-44).

The examples of the Kuninda coinage comprise of the well-known silver and copper issues of Amoghabhūti, the modules of which were obviously suggested by the hemidrachms of the late Indo-Greek money and possibly invented by the Indian ruler to circulate a native currency that would compete in the market with those of the foreigners'.

The coins of the Yaudheyas are of the Karttikeya and Lakşmi (?) type. They show unmistakable influence of the late Kushana copper coinage and belong to the third-fourth centuries A.D.

The few uninscribed and die-struck copper coins from Taxila that are in the Museum fall into two classes. The coins of Class I represent the double-die series and the coins of Class II are the single-die issues. The coins are characterised by the incuse on one side or on both with various marks or motifs within them (Pl. IV); the double-die pieces have devices in relief on one of the sides. The same peculiarities are prominent as are well known in the Taxila copper coins of the Indo-Greek rulers Pantaleon and Agathocles. The rule of these two kings in the Punjab region cannot possibly be dated earlier than the last quarter of the second century B.C. It is, therefore, curious how Allan contended that these traits on the local issues of Taxila could have been due to the influence of the Taxila coinage of these monarchs. It may be assumed that the alien rulers borrowed for some of their Indian issues the monetary technique prevalent in Taxila with which their Indian subjects were familiar.



EARLY SINGLE TYPE SILVER COINS

Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
		BENT	T-BAR SILVER COINS	
		C	LASS I: GROUP I	
			Variety a	
1	AR/Oblong 1-60×-35	177:75	Mark 1a on either end of the bent-bar, counter- marked by 1b in the centre.	
2	1-55×-40	177-85	As preceding,	As preceding.
				(Collected, 1942) Pl. IV. 1-2.
			Variety b	
3	Round -61	44-25	Mark 2 in the centre.	• Plain.
4	-60	44-0	As preceding.	• As preceding.
				(Collected, 1942) Pl. IV, 3-4.
			4. 5. 3.	
			NGLE TYPE SILVER CO	

CLASS I: GROUP I

Variety a

-5	-20	3-50 Mark 3	Plain.
6	-20	3-50 . As preceding.	As preceding.



MINUTE SINGLE TYPE SILVER COINS

Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
7	AR/Round	3.45	As preceding.	As 'preceding.
8	-19	3.45	,	,
9	-19	3-40	,,	,,
10	-20	3-40	,	
				(Collected, 1942)

(Collected, 1942) Pl. IV. 5-10.



PUNCH-MARKED COINS

II

Serial Metal/Size Weight in Obverse Marks Reverse Marks
No. Grains

PUNCH-MARKED SILVER COINS

CLASS I: GROUP I

Variety a

1 AR/Square 51.50 1. 2a. 3a. 5a. 22 -91×.62 Hammered—traces of five marks.

GROUP II

Variety a

2 ·90×·57 49·50 1. 2a. 4a. 4b. 15f

1. 2b. 4a. 38, and one illegible mark.

Variety b

3 ·81×·78 48·70 1. 2a. 4a. 5b. 15f 1. 2b. 25. 29, and one illegible mark.

Variety c

4 ·82×·73 48·50 1. 2a. 4b. 5b. 15f 1. 2d. 4b. 15b. 46

GROUP III

Variety a

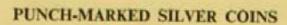
5 ·92×·74 48·60 1. 2a. 5b. 15f. 27 • 1. 2b. 3c. 28. 29

Ser	rial o.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
				GROUP IV	
				Variety a	
	6	AR/Square	48-50	1. 2d. 5b. 15f. 18	
		-95×-67		1. 2d. 10c. 10h. 15d	
				GROUP V	
				Variety a	
7	7	.97×.52	50-70	1. 2n. 4a. 7. 10a, additional 27	
				1. 2b. 29. 47. 52	(Chandraketugarh, Collected, 1956-'58) Pl. IV. 1-7.
				Variety b	
8	3	·80×·59	49-50	1. 2n. 4a. 7. 10a, addi- tional 53	
				1. 2b. 15b. 29, and one illegible mark.	
				GROUP VI	
				Variety a	
9	9	·74×·59	49-50	1. 2b. 4a. 5a. 18, additional 53	
				1. 2c. 15c. 25, and one illegible mark.	
				GROUP VII	
				Variety a	
10	0	Round	48-25	1. 2i. 5b. 10h. 23	
		-84		1. 2d. 5b. 10h. 10d	



No.	Weight in Grains	Obverse Marks	Reverse Marks
		GROUP VIII	
		Variety a	
11 AR/Square	48-70	1. 2h. 4b. 7. 10a	
·87×·80		1. 2h. 10h. 15b. 29	
		GROUP IX	
		Variety a	
12 ·84×·57	49-25	1. 2h. 10ff. 14. 15g	•
		1. 2k. 18. 29, and one illegible mark.	
		GROUP X	
		Variety a	
13 ·81×·75	50-50	1. 2c. 15n. 20. 31, additional 53	
	•	1. 2h. 5b. 10h. 53	
		GROUP XI	
		Variety a	
14 Round	50-25	1. 2d. 5b. 18. 29	
-81		1. 2h. 9. 43, and one illegible mark.	

(Chandraketugarh, Collected, 1958-'60) Pl. IV-V, 8-13.



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
			GROUP XII	Mark Balls
			Variety a	
15	AR/Square ·62×·47	50-50	1. 2j. 15h. 15j, and one illegible mark.	
			1. 2k. 19. 29, and one illegible mark.	
				(Chandraketugarh, Explored, 1960) Pl. V. 14.
			GROUP XIII	
			Variety a	
16	·59×·51	55-90	1. 2o. 5a. 34, and one illegible mark.	
			1. 2k. 15g. 34, and one illegible mark.	
				(Rajgir, Collected, 1939 Pl. V. 15.
		•		
		. C	LASS II: GROUP I	
			Variety a	
17	Round -74	52-50	1. 2a. 3a. 4a. 5a	Plain.
18	Square .77×.63	-53-0	As preceding.	As preceding.
19	·69×·55 •	52-0		
20	·71×·55	52-25		,
21	·68×·56*	52-70		
22	·56×·53	52-0		11.



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
			Variety b	
23	AR/Square ·63×·53	49-50	1. 2a. 3a. 4a. 5a	42
				(Chandraketugarh, Collected, 1958-'60)
24	·70×·53	45-90	As preceding.	As preceding.
				(Kosam, Collected, 1937)
25	·72×·55	52-0		61
26	·63×·55	51-50	,*	55
			Variety c	
27	·66×·54	52-0	1. 2a. 3a. 4a. 5a	49. 55
28	·82×·48	51-50	As preceding.	43. 63
29	·65×·54	51.0		45. 50
30	·72×·53	51-80		42. 47
			Variety d	
31	-62×-57	49-70	1. 2a. 3a. 4a. 5a	42. 45, and one illegible mark.
32	-73×-66	51-0	As preceding.	45. 59. 61
			· Variety e	
33	•75ו56	51-50	1, 2a, 3a, 4a, 5a	45. 51. 49, and two i
				legible marks.
34	·63×·59	46-75	As preceding.	47, 55, 61, and two il legible marks.



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
35	AR/Round ·70	51-80	As preceding	45. 49. 55. 58, and one illegible mark.
36	Square ·76×·52	52-25		53. 55. 58. 59, and one illegible mark.
				Pl. V. 16-34.
			GROUP II	
			Variety a	
37	·62×·53	51-25	1. 2b. 3a. 4a. 5a •	Plain. Pl. V. 35.
			GROUP III	
			Variety a	
38	·85×·46	50-50	1. 2f. 3a. 4a. 5a	42. 49. 53. 55
				(Chandraketugarh, Explored, 1956-'58)
		•		Pl. V. 36,
•		. CL	ASS III: GROUP I	
			Variety a	
39	AR/Square	. 51-50	1. 2a. 3a. 4a .16	Plain.
			Variety b	
40	·67×·51	50-50	1. 2a. 3a. 4a. 16	57. 58
			Variety c	
41	• Round •	51-0	1. 2a. 3a. 4a. 16	55. 58. 61



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
			Variety d	
42	AR/Square	51-25	1. 2a. 3a. 4a. 16	42. 44. 47. 55
	05 % 10			Pl. V-VI. 37-40.
			GROUP II	
			Variety a	
43	·76×·57	51-70	1. 2a. 3d. 4a. 16	44
44	·68×·54	51-50	As preceding.	45 •
45	·84×·45	51-0	*	55
			Variety b	
46	·74×·63	52-0	1. 2a. 3d. 4a. 16	42. 42
47	·77×·73	52-50	As preceding.	As preceding. •
			Variety e	
48	·74×·62	51-25	1. 2a. 3d. 4a. 16	 42. 61, and one illegible mark.
				* (Chandraketugarh, * Explored, 1956-'58)
				Pl. VI. 41-46.
			GROUP III	
			Variety a	
_49	·67×·53	52:25	1. 2b. 3c. 4a. 16	53, and one illegible mark.
		7		Pl. VI. 47.

Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
		CI	ASS IV: GROUP I	
			Variety a	
50	AR/Square	51-0	1. 2a. 3a. 5a. 22	45
	*/2×*04			PI. VI. 48.
			GROUP II	
			Variety a	
51	·50×·47 -	51-50	1. 2a. 3a, 5a, 26	One illegible mark.
			Variety b	
52	·70×·62	52-0	1. 2a. 3a. 5a. 26	42. 47, and one illegible mark.
				PI. VI. 49-50.
			GRÓUP III	
			Variety a	
53	Round -82	52-25	1. 2a. 3a. 5a. 10g	45
*		•	Variety b	
54	Square ·69×·61	50-0	1. 2a. 3a. 5a. 10g	42, and one illegible mark.
				Pl. VI. 51-52.
			GROUP IV	
			Variety a	
55	·67×·64	49.70	1. 2a, 3a, 5a, 24 •	55. 57. 58

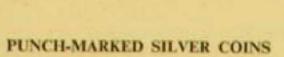


Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
56	AR/Square ·70×·55	51-25	As preceding.	42, and two illegible marks.
57	·70×·56	50-25		47. 55, and one illegible mark.
				PI. VI. 53-55.
			GROUP V	
			Variety a	
58	Round ·74	50-50	1. 2a. 3a. 5a. 39	42 *
				(Chandraketugarh, Explored, 1956-'58)
				Pl. VI. 56.
		C	LASS V: GROUP I	
			Variety a	*
59	·67×·57	51-25	1, 2f. 3a. 4a. 13	₂ 4 5. 61
			Variety b	
60	·82×·53	50-50	1. 2f. 3a. 4a. 13	42. 47, and one illegible mark.
				Pl. VI. 57-58.
			2 10 10 10	
		CI	LASS VI: GROUP I	
			Variety a	
61	·67×·56	51-50	1, 2f, 3a, 13, 18	47. 33, and one illegible mark.

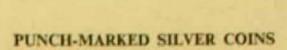
Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
62	AR/Square ·63×·51	51-0	As preceding.	57. 58, and one illegible mark.
				Pl. VI. 59-60.
		CL	ASS VII: GROUP I	
			Variety a	
63	Round •76	50-50	1. 2c. 7. 10a. 18	45, 47, 53, 55
			Variety b	
64	Square •73ו71	48-50	1. 2c. 7. 10a. 18	44. 47. 53. 55, and one illegible mark.
				Pl. VI. 61-62.
			.	
		CL/	ASS VIII: GROUP I	
			Variety a	
65	Oblong 64	52-25	1. 2b. 3d. 4b. 21	44
		•		Pl. VI. 63.
		° CL	ASS IX: GROUP I	
			Variety a	
66	Square -68×-54	*50-50	1. 2a. 4a. 11. 17	Plain.
			Variety b .	
67	·74×·57	51-50	1. 2a. 4a. 11. 17	42. 45. 56, and one illegible mark.
				(Chandraketugarh, Ex-
				plored, 1956-'58) Pl. VI. 64-65,



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
			GROUP II	
			Variety a	
68	AR/Square •68ו63	49-25	1. 2a. 11. 15e. 17	Plain.
			Variety b	
69	·74×·50	51-30	1. 2a. 11. 15e. 17	42. 47
				Pl. VI-VII. 66-67.
			GROUP III	
			Variety a	
70	·68×·56	52-70	1. 2a. 11. 15i. 17	One illegible mark.
			Variety b	
71	Round	51-0	1. 2a. 11. 15i. 17	- 42. 51
	-77			. Pl. VII. 68-69.
		C	LASS X: GROUP I	
			Variety a	
72	Square -64×-58	50-0	1. 2b. 9. 24. 33	Plain.
			Variety b	
-73	Round	51-25	1. 2b. 9. 24. 33	57.,60
	-68		30 92	Pl. VII. 70-71.



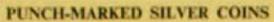
Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
			GROUP II	
			Variety a	
74	AR/Square -72×-67	52-25	1. 2m. 9. 24. 33	45, and one illegible mark.
				Pl. VII. 72.
		CL	ASS XI: GROUP I	
			Variety a	
75	-80 ×-54	50-25	1. 2a. 4a. 5b. 15f.	42. 53. 55. 59
76	·82×·44	52-0	As preceding.	42, 42, 45, 53
				(Chandraketugarh, Explored, 1956-'58) Pl. VII. 7 -74.
			CLASS XII: GROUP I	
		•	Variety a	
27	Round ·84	5 b 0	1. 2d. 5b. 10h. 15f	Plain.
				Pl. VII. 75.
	4.0		GROUP II .	
			Variety a	
78	-84 .	48-50	1. 2i. 5b. 10h. 15f	44. 55. 58
-				Pl. VII. 76.



		Tonci	I-MARKED SIETER C	
Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
		CI	ASS XIII: GROUP I	
			Variety a	
79	AR/Round -87	50-50	1. 2f. 3a. 10h. 13	47. 53. 57, and one illegible mark.
				Pl. VII. 77.
		C	LASS XIV: GROUP I	
		120	Variety a	53. 55
80	Square ·89×·72	51-0	1. 2a. 4a. 5d. 32	Pl. VII. 78.
			LASS XV: GROUP I	
			Variety a	
81	·75×·62	52:50	1. 2a. 6. 15g. 18	42. 53
				Pl. VII. 79. 103.
			Received to be	
			* Lee VVI. CROUP I	
		(LASS XVI: GROUP I	

Variety a

• 82 ·74×·59 50·0 1. 2d, 10e, 10f, 35 42, 45
PI. VII. 80.



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
		CL	ASS XVII: GROUP I	
			Variety a	
83	AR/Square -92×-63	51-25	1. 2g. 15d. 15m. 41	42. 45. 53, and one illegible mark.
				Pl. VII. 81.
		CL	ASS XVIII: GROUP I	
			Variety a	
84	·72×·56	52-25	1, 2a, 5b, 24, 40	Plain.
				(Chandraketugarh, Explored, 1958-'60) Pl. VII. 82.
			GROUP II	
			Variety a	
~85	·72×·51	52:50	1, 2a, 10b, 24, 40	Plain.
				Pl. VII. 83.
		C	LASS XIX: GROUP I	
			Variety a	
86	66× 64	52-25	1. 2e. 5a. 5c. 24	45. 59
				PL VII. 84.

Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
			GROUP II	
			Variety a	
87	AR/Square ·63×·62	52-50	1. 2e, 5a. 5c. 22	57, and one illegible mark.
				Pl. VII. 85.
		C	LASS XX: GROUP I	
			Variety a	
88	·86×·52	51-0	1. 2n. 4a. 7. 10a. additional 27	- 42. 48. 51. 55
			tional 27	Pl. VII. 86.
		C	LASS XXI: GROUP I	
			Variety a	
89	·71×·45	51-0	1, 2b. 15e. 36, 37	54, and one illegible mark.
				• Pl. VII. 87. •
		CI	ASS XXII: GROUP I	
			. Variety a*	
90	Round -65	52-80	1. 2b. 12. 15i (7). 34	45
	1			(Chandraketugarh, Ex- plored, 1958-60)
				Pl. VII. 88.



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
91	AR/Square	34-15	As preceding.	As preceding.
	1027.00			(Kosam, Collected, 1936)
			GROUP II	
			Variety a	
92	Round	51-25	1. 2b. 15j. 22. 34	56. 61
	-61			Pl. VII. 89.
			GROUP III	
			Variety a	
93	Square ·56×·41	52-70	1. 2b. 15k. 30, 34	55, 56
				Pl. VII. 90.
		, CL	ASS XXIII: GROUP I	
			Variety a	
94	·56×·55	51-25	1. 2o. 5c. 8. 24	One illegible mark.
95	·46×·45	51.80	As preceding.	As preceding.
96	·50×·49	52-50		54
				Pl. VII. 91-92.
			GROUP II	
			Variety a	
, 97	Round *	52-90	1. 2o. 8, 15a, 24	54



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
			Variety b	
98	AR/Square ·49×·43	51-70	1 2o. 8. 15a. 24	15c (small).
			Variety c	
99	·54×·44	52-25	1. 2o. 8, 15a, 24	56, and one illegible mark.
				PI. VII. 93.106-7.
			GROUP III	
			Variety a	
100	·64×·42	48-50	1. 2o. 8. 15b. 24	One illegible mark.
				(Chandraketugarh, Ex plored, 1956-'58) Pl. VII. 94.
			enoun ut	
			GROUP IV	
			Variety a	
101	·52×·51	48-75	1. 2b. 8. 15a. 24	One illegible mark.
				(Rajgir, Collected, 1939)
		CL	ASS XXIV: GROUP	I
			Variety a	
102	Round	53-25	1, 20, 8, 24, 34	54
	-56			(Chandraketugarh, Ex- plored, 1956-58)



Seri		Weight in Grains	Obverse Marks	Reverse Marks
103		51-50	1. 2o. 8. 34, 24 out of the flan.	54
	-54		nan.	(Chandraketugarh, Explored, 1956-'58)
104	Square ·52×·45	47-60	As preceding.	As preceding.
	*32X *43			(Rajgir, Collected, 1936) Pl. VII. 95.
			GROUP II	
			Variety a	
105	Round	51-25	1. 2b. 8. 24. 34	56
	-57			(Rajgir, Collected, 1953)
106	-63	32.85	As preceding.	As preceding.
				(Bangarh, Excavations, 1938-'41)
				Pl. VIII. 96.
			ASS XXV: GROUP I	
			Variety a	
167	Square +68×+58	5340	1. 2b, 5a, and two illegible marks.	Plain.
108	·68×·57	53-25	As preceding.	As preceding.
				(Chandraketugarh, Explored, 1956-'58)
109	·68×·57 "	53-50		
110	⋅68×⋅58	53-75		
111	-68×-58	54.0		
				(Rajgir, Collected, 1939) Pl. VIII. 97-98.

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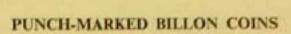


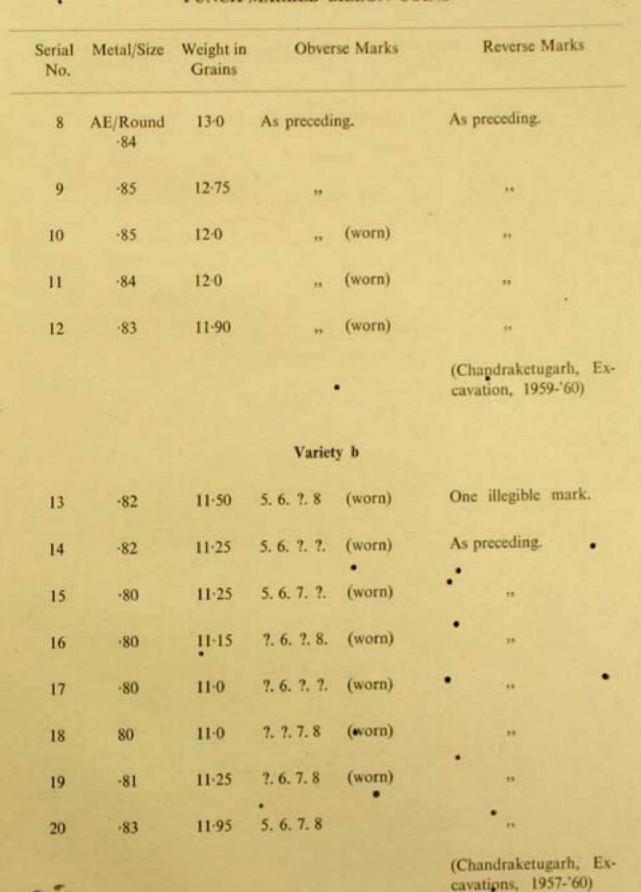
Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
		CL	ASS XXVI: GROUP I	
			Variety a	
112	AR/Square -75×-51	44-50	1. 2b. 3a, 34, 35 (worn)	Plain.
113	·53×·42	44-25	As preceding.	As preceding.
114	·54×·53	42.50	,	
115	·56×·47	44-50	,	,,
116	·52×·47	43-10	"•	• "
117	·49×·45	43.75	**	*
118	·55×·49	42.10	,,	**
119	·58×·53	42-10		39
120	-58×-41	41-25	,,	
				(Rajgir, Collected, 1939
121	-47×-44	44-10		
122	·51×·50	•39-95	· · · · · · · · · · · · · · · · · · ·	100
123	·68×·63	45.50	**	
				(Kosam, Collected, 1938)
124	·70×·52	38-75		
125	·60×·54	35.50		
126	Round	36.75		
••	.59			(Bangarh, Excavations 1938-'41) Pl. VIII. 99-100.

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PUNCH-MARKED BILLON COINS

		Grains	Obverse Marks	Reverse Marks
			CLASS I: GROUP I	
			Variety a	
1	AE/Square ·60×·51	51-50	1. 2. 3	Plain.
2	·61×·51	51-75	As preceding.	As preceding.
				(Bangarh, Excavations, 1938-'41)
3	·57×·52	45.75		,,
				(Chandraketugarh, Ex- cavation, 1958-'59)
4	·60×·52	49-10	"	,
				(Chandraketugarh, Ex- plored, 1960)
5	Round -58	46-0	" (worn)	
		•	Fisher	(Harinarayanpur, Explored, 1958) Pl. VIII. 1—5.
			Variety b	
6	Square -60×-51	47-70	1. 2. 3	11
	00 X 31			(Chandraketugarh, Explored, 1960) Pl. VIII, 6.
		CI	ASS II: GROUP 1	
			Variety a	
7	Round * *	12-25	5. 6. 7. 8	Plain. (Chandraketugarh, Ex- cavation, 1958-'59)





Pl. VIII. 7.



24		PUNCH-MARKED BILLON COINS				
Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks		
		C	CLASS III: GROUP I			
			Variety a			
21	AE/Round	28-50	5, 9, 10, ?,	Plain.		
	12			(Chandraketugarh, Explored, 1960)		
				Pl. VIII. 8.		
		PUNCH	MARKED COPPER CO	OINS		
		CI	ASS 1: GROUP I			
			Variety a			
1	AE/Square ·64×·44	33-0	3, 4, 5, 6,?	Plain.		
,2	·64×·44	32-90	As preceding.	As preceding.		
3	·63×·44	*32-90	•	*		
				(Chandraketugarh, Ex-		

,2	·64×·44	32-90	As preceding.		As preceding.
3	-63×-44	*32-90	• "		*
					(Chandraketugarh, Ex- cavation, 1959-'60)
			Variety b		
4	-60×-43	32.75	3. 4. 5. 6. ?.		12. 13
5	·60×·43	.32.50	As preceding.		As preceding.
					(Chandraketugarh, Ex- cavation, 1959-'60)
					Pl. VIII. 9.
6	-59×-44	31-50	" (wo	rn)	

(worm)

·59×·44

31-0



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
8	AE/Square ·59×·45	33-10	As preceding.	As preceding.
9	·59×·45	33-10		,
10	·59×·46	33-15	**	,
11	·58×·46	33-20		* 1
12	·58×·46	33-15	"	
13	·58×·45	32-85		
14	·58×·45	32-75	•	
15	·58×·45	32-75		
16	·58×·45	32.70	.,	**
17	·58×·44	32.50		
18	·58×·44	32.50	,	
19	·58×·44	32.40		
20	·58×·44	32-25		. "
21	·58×·44	* 32-25		

(Chandraketugarh, Excavation, 1959-'60) Pl. VIII. 9.



III
UNINSCRIBED CAST COPPER COINS

Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Mark	s
			CLASS I: GROUP I		
			Variety a		
1	AE/Round -53	35-0	1a, 4, 5, 8	2. 3. 7	
2	-53	35-10	As preceding.	As preceding.	
3	-53	35-10	,	29	
4	-53	35-15	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	**	
5	-53	35-20			
6	-52	35-0	,,	,,	
7	-52	35-15	,	**	
8	-52	, 35-25			
9	-52	35-50			
10	-53	35.50	**	. "	
11	-53	55-55		,	
12	-53	35-75		,,	
				(Harinarayanpur, plored, 1956-'60) Pl. IX. 1-4.	Ex-
			CLASS II: GROUP I		
			Variety a		
13	Square 56×50	48-75	9	Worn.	

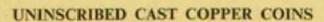


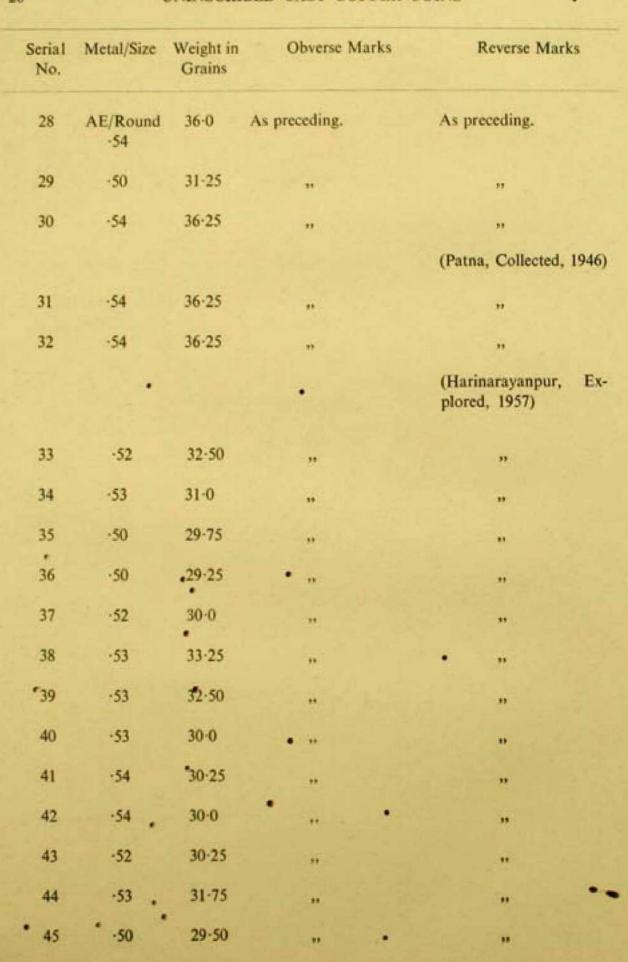
Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
14	AE/Square	45-50	As preceding.	As preceding.
			Variety b	
15	·55×·54	45.50	1c	Worn.
16	·56×·54	45-25	As preceding.	As preceding.
				(Harinarayanpur, Explored, 1956-'60) Pl. IX. 5-6.

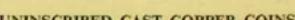
CLASS III: GROUP I

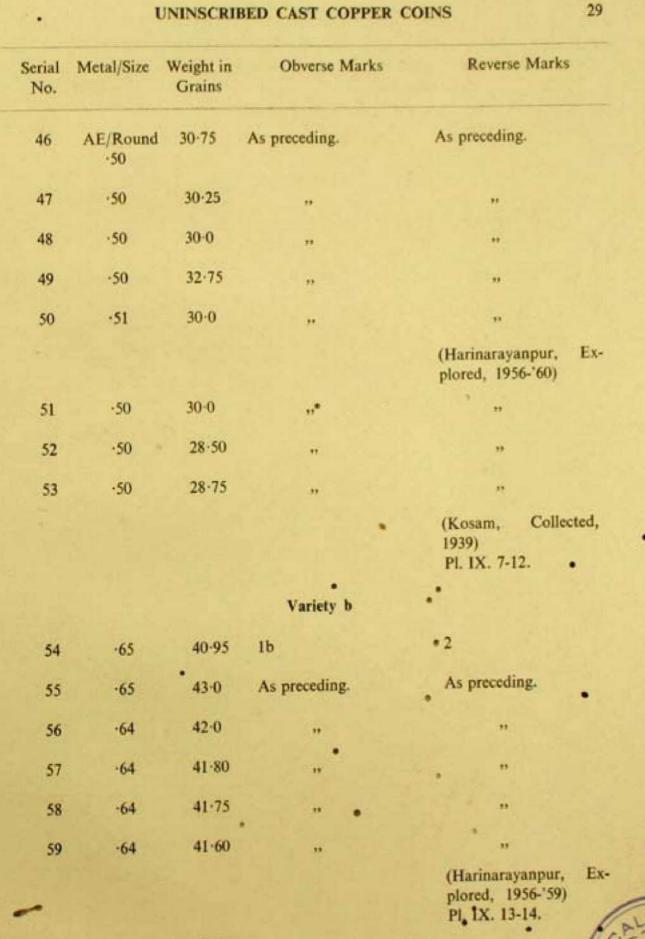
Variety a

17	Round •54	36.0	1a	2		
18	-54	35.80	As preceding.	As	preceding.	
19	-50	30-25	,, •		**	
20	-50	31-0	,	•		
21	-50	* 30.0				
22	-50	29.0	,,			
23	-50	30-0	"•			
24	-49	29.0				
		•		(Ra	jgir, Collected,	1939)
25	-50	30.75			**	
2 6	-50	31.0			"	
27	-50	29.0 -			0	auti









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-65



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
	A Control of	C	LASS IV: GROUP I	
			Variety a	
61	AE/Square ·60×·54	60-0	1a. 3. 4. 5	2, 5, 6, 7
62	·60×·54	62.75	As preceding.	As preceding.
63	·60×·54	61.75	**	
64	·60×·53	59-0		***
65	·60×·54	61-50	v	
				(Patna, Collected, 1942)
66	·60×·56	60-0	,	
67	·61×·56	62-0	,	,
68	·61×·57	61-75	,	,,
69	·61×·56	61.80		,
70	·60×·57	61-60		"
71	·60×·55	60-75		
72	·60×·57	60-95	29	,
73	·61×·56	60-95	P. 40	C. S. C. S. C. S. C.
				(Rajgir, Collected, 1939)
74	·61×·50 -	60-75		,,
75	·61×·52	60.70		
76	·61×·53 ·	60-75		
77	·61×·54	60-90		



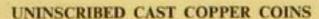


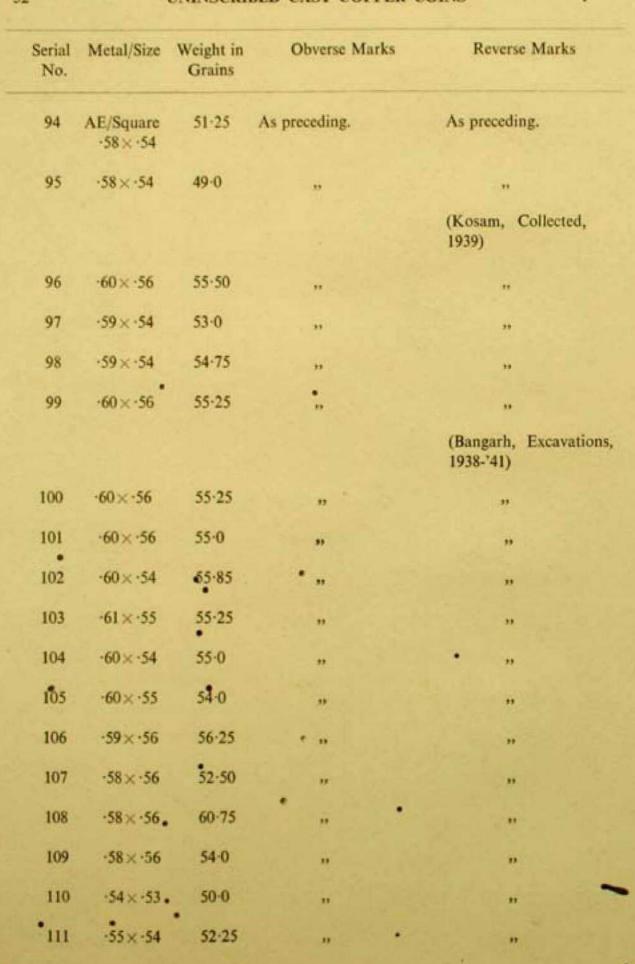
Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
78	AE/Square ·61×·55	60-80	As preceding.	As preceding.
79	·61×·56	60-85		
80	·61×·56	60-80	.,	**
81	·61×·57	61-55		**
82	·61×·57	61.50	,,	н.
83	·61×·57	61-25		n
				(Harinarayanpur, Explored, 1956-60) Pl. IX. 15-17.

CLASS V: GROUP I

Variety a

84	·59×·56	55-9	1a. 4. 5. 6.*8	• 2. 3. 6. 7
85	·59×·56	55-25	As preceding.	As preceding.
86	·59×·56	• 55.0	,,	***************************************
87	·59×·56	49.50		
88	·59×·54	48.0	, •	ALEX TO SECURE
89	·59×·54	48.25		Harry Harry
90	·60×·54	48.50 *	,	
91	·59×·54	50-0	(0)	**
92	·59×·54	51-25		
93	·59×·56	54.0		

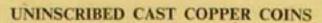




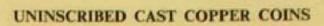


UNINSCRIBED CAST COPPER COINS

Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
112	AE/Square ·59×·54	54-35	As preceding.	As preceding.
113	·58×·54	53-25		*
114	·57×·51	53-50	*	(Chandraketugarh, Explored, 1956-*60)
115	·56×·53	53-75	,	*
116	·56×·55	52-50		
117	•56ו55	52.75	,•	(Patna, Collected, 1942)
118	-56×-54	53-25		*
119	-56×-53	52.50		
120	·56×·54	53-25		
121	·56×·55	52-25	. •	
122	·56×·54	52.0	**	***
123	·56×·54	. 52-75	***	
124	·56×·55	53-80		
125	·56×·56	53-75		***
126	+56×+56	54-0		
127	·56×·56	54-0		
128	·56×·56	53-75		
129	·56×·56	53-50		. 10
				(Chandrakelugarh, Ex- cavations, 1957-'60)



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
130	AE/Square ·56×·55	53-25	As preceding.	As preceding.
131	·56×·55	52-90		
132	·56×·54	52-95		
133	·57×·56	52-50		
134	·57×·56	52.75		,
				(Harinarayanpur, Explored, 1956-'60)
135	·57×·56	52-95		
136	·57×·56	53-0	,	,
137	·57×·56	53-25	"	,,
138	+57×+56	53-60	,,	,,
139	·57×·56	53.75		
140	·57×·56	53-75	**	
141	·57×·56	53-80		
142	·57×·56	53-85		
143	·57×·56	53-80		
144	·57×·56	53.80		
145	·57×·56·	53-90		
146	·57×·56	53.95		
147	·57×·56 ·	53-95	-	
148	·57×·56	54-0		



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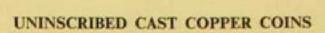
Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
149	AE/Square	54-0	As preceding.	As preceding.
150	·57×·57	53.75		*
151	·57×·57	53-50		
152	·57×·57	53-50		
				(Harinarayanpur, Ex- plored, 1956-'60)
153	·59×·54	54-85	,,	
154	·60×·55	54-90		
155	·60×·56	55-85		,,
156	-59×-56	56.75		*
157	-60×-55	56-25	**	
158	-59×-55	49.0		,,
159	·62×·54	50-0		
160	·59×·54	49-75	,,	
161	·58×·54	54.0		
162	·59×·54	55-25		
102	33 / 37		***************************************	«(Kosam, Collected,
163	·60×·54	55-90		• "
164	·60×·55	55-0	,	Contract of the second
165	·60×·55	54.0	*	The second room
166	-60×-58	55-50		
			0.000	



UNINSCRIBED CAST COPPER COINS

Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
167	AE/Square ·59×·58	52-75	As preceding,	As preceding.
168	·59×·53	50-0	**	
169	·59×·56	52.0	.,	,,
170	·59×·58	52.75		,
				(Ptana, Collected, 1948)
171	·59×·54	50-25	.,,	
172	·60×·54•	50.0	•"	,,
173	·59×·54	50-25		,,
174	·58×·53	50.0	,,	,,
175	·59×·54	51.0	,,	,,
176	·59×·53	48.25		**
177	-56×-56	49.75	•	
178	·56×·56	48.0		
179	-55×-54	35.0		
180	·55×·54	34.0	,	
181	·59×·54	53.75	• "	
182	·59×·54	54.0	*	
183	·59×·54 •	54.50		
184	·58×·54	54.75		
185	·59×·54 •	52-50		

(Rajgir, Collected, 1939)



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Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
186	AE/Square	54-0	As preceding.	As preceding.
187	·58×·54	54-25		**
188	·59×·54	54.0	,	,
				(Tamluk, Collected, 1956)
189	·58×·54	54-25	,	
190	·58×·54	55.0		,
191	·59×·54	53.75	.,	,,
192	·58×·54	54.0	31	" (
193	·58×·54	54.0		
194	-58×-54	54-0		,,
				(Tamluk, Collected, 1957)
195	·58×·54	53-75	,	
196	·58×·54	•54-0		"
197	·58×·54	54-0		, "
198	·58×·54	54.0	, .	
199	·58×·54	53-75		
200	·58×·54	54-0	• " •	
201	·58×·54	54.0	"	
202	·58×·54	54-0		
203	·58×·54	54-25	,	



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
204	AE/Square ·58×·54	54-0	As preceding.	As preceding.
205	-59×-55	55.0	**	,,
				(Bangarh, Excavations, 1938-'41)
206	·60×·56	55-25	**	
207	·60×·56	56-0		
208	·60×·56	56-25	.,	
209	·60×·56	56-25	.,	,
210	·60×·55	55-75	,	,,
211	·60×·55	55.50		**
212	·60×·55	55-25		
213	·60×·55	55-25	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
214	·60×·56	55-25	,	
		•		(Chandraketugarh, Ex- cavations, 1957-'60)
215	·60×·56	\$5.0		The state of the s
216	·59×·57	55-75		
217	·59×·57	55-50	***	
218	·59×·57	55-25	•	,
219	·59×·57	55-0		
220	·59×·58	56-0		
221	·59×·58	55-75		,



UNINSCRIBED CAST COPPER COINS

Serial No.		Weight in Grains	Obverse Marks	Reverse Marks
222	AE/Square	55-50	As preceding	As preceding
				(Chandraketugarh, Explored, 1960)
				Pl. 1X. 18-21,

CLASS VI: GROUP I

100.00	- 4	100		
-	CO PT 1	24.0	K.F.	-056
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223	·59×·58	55-25	1a. 4. 5. 6	2. 3, 6. 7	
224	·59×·58	55-0	As preceding.	As preceding.	
225	-59×-58	54.85	,,	"	
226	·58×·58	56-0	,,	**	
227	·58×·58	55.75	,,		
228	·58×·58	55.50			
229	·58×·58	55:25			
230	·58×·58	• 55.0	**	"	-
231	·58×·58	55.0	**		
232	·58×·58	54-90		ARTON AND THE	
233	·58×·58	54-75			
234	-58×-58	54-50		• "	
235	·58×·58	54-25			
236	·60×·57	56.0			
237	·60×·57	55.85			



Serial No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
238	AE/Square ·60×·57	55-75	As preceding.	As preceding.
239	·60×·57	55-75	**	n
240	·60×·57	55-60		,
				(Harinarayanpur, Col- lected, 1959)
241	-60×-57	55-60	,,	,,
242	·60×·57	55-50	39	**
243	·60×·57•	55-25		,,
244	·60×·57	55-25	19	**
245	·59×·59	55:75	19	**
246	·59×·59	55-75	,,	,,
247	·59×·59	55-50	,,	,
248	·59×·59	55-50	,,	,,
249	·59×·59	55-30	. ,,	
250	·59×·59	55.25		,,
251	·59×·59	55-25		,
252	·59×·59	55-10	,,	
253	-59×-59	58.0		,,
254	·59×-59	55-0		,,
255	·59×·59	55-0	. ,,	
256	·59×·59	54-90	1)	,
257	·59×·59	54-75		,
258	·59×·59	54-50	,,	,

(Harinarayanpur, Explored, 1956-'60)

Pl. IX. 22-27.



IV

TRIBAL AND LOCAL COINS

TRIBAL AND LOCAL COINS						
Serial No.	Metal/Size	Weight in Grains	Obverse	Reverse		
			KUŅINDA			
			AMOGHABHŪTI			
			First Century B.C.			
1	AE/Round -83	59-25	Deer to r.; female figure (Laksmi) standing on lotus, facing, holding flower in uplifted r. hand.	marks 4 & 11 above, 5, 6 & 10 in the middle,		
			Marks 1 above back of the deer, and 2 above between its horns.	No marginal legend.		
			Circular legend in Brāhmī characters, Rājña (h) Kunindasa Amogha- bhūt (i) sa Mahārājasa.			
2	·84	59.0	As preceding.	As preceding.		
3	-84	59.0				
4	-83	46.0	" (worn)	•		
5	-83	45-90	" (worn)	•		
				(Collected, 1942) Pl. X. 2.		
			KUŅINDA.			
			AMOGHABHŪTI			
1			First Century B.C.			
1	AR/Round -71	34-15	Deer to r.; female figure (Lakşmī?) standing on	Marks 4 & 11 above, 5, 6 & 10 in the middle,		



Serial No.	Metal/Size	Weight in Grains	Obverse	Reverse
			lotus, facing, holding flower in uplifted r. hand.	and 13 below.
			Marks 1 above back of deer, 2 above horns of deer, and 3 below deer.	Marginal legend in Kharosthī, Raña Kuņi- dasa Amoghabhutisa Maharajasa.
			Circular legend in Brāhmī characters, Rňjña (h) Kuṇi(m)dasa (sya) Amoghabhutisa (sya) Mahārājasa (sya).	
2	-70	34-25	As preceding.	As preceding.
				(Collected, 1942) Pl. X. 1.

TAXILA

UNINSCRIBED AND DIE-STRUCK

CLASS I: GROUP I

Variety a

1	AE/Square ·61×·60	70-25	3. 8. 12	3. 4. 9
2	·60×·60	70-0	As preceding.	As preceding.
3	·60×·60	70-05		
4	·60×·60	70-05	,,	,,

(Collected, 1938) Pl. X. 3.



TRIBAL AND LOCAL COINS

Serial No.	Metal/Size	Weight in Grains	Obverse	Reverse	

TAXILA

UNINSCRIBED AND DIE-STRUCK

CLASS II: GROUP I

Variety a

1	AE/Round -96	177-0	3. 7	Plain.
2	-96	176-75	As preceding.	As preceding.
3	-95	176-75		
4	-95	176-50	"	
5	-95	176-25	,,	,,
6	-95	176-25		
7	-94	176-0		
8	-94	176.0		
				(Collected, 1948) • Pl. X. 4-5.

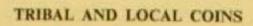
YAUDHEYA

THIRD-FOURTH CENTURY A.D.

CLASS I: GROUP I

Variety a

1	AE/Round	177-25	A STATE OF THE PARTY OF THE PAR	female deity (Laksmi?) walking to 1. with r.
		100	foot.	on mp.



Serial No.	Metal/Size	Weight in Grains	Obverse	Reverse
			Legend in Brāhmī characters, Yaudheya-gaṇasya ja(ya).	
2	1-0	177-0	As preceding.	As preceding.
3	1.0	177-05	-	,,
			Variety b	
4	1.0	177-10	As preceding, with addition of the word dve at the end of the usual legend.	As preceding, with addition of a flower-vase on l. and inverted ornate nandipada on r.
5	1.0	177-25	As preceding.	As preceding.
6	1.0	176-75	" (worn)	
7	1-0	176-50	" (worn)	**
•				(Collected, 1940) Pl. X. 6-7.

ADDITIONS

PUNCH-MARKED BILLON COINS

About six months back when the typescript of the present volume went to the press, since then the Museum has acquired three well-preserved specimens of punchmarked billon coins of the shiptype from Chandraketugarh. The fresh coins further strengthen my observations about the type as laid down in Part II of the Introduction of this volume.¹ The coins are described below according to their class and variety.

Class I: Group I

Variety a

SI. No.	Metal/Size	Weight in Grains	Obverse Marks	Reverse Marks
1	AE/Square ·60×·53	52.76	1. 2. 3	Plain
2	·61×·52	52.70	As preceding	As preceding Pl. X. Additions 1-2.
		Vai	riety b	
3	·62×·54	52.80	1. 2. 3	Pl. X. Additions 3 (Enlarged). (Chandraketugarh, Ex- plored, 1962).

¹ See p. xv supra.



INDEX

Alexander the Great, gold coin of, xi. Amoghabhūti, coins of, xviii, 41-42. Bent-bar Silver Coins, Introduction, vii-viii, Catalogue, I. Curtius, account of, viii. x. Dharanas, coins, xi. Diodotos, coins of, viii. Early Single Type Silver Coins, Introduction, vii-ix. Catalogue, 1-2. Kārshāpaņa, coins, x. xiii. xvi. Kunindas, coins of, xviii. 41-42. Māsha, Māsha, ix. Minute Single Type Silver Coins, Introduction, viii-ix, Catalogue, 1-2. Philip Aridaeus, coin of, viii. xi. Punch-marked, coins, Introduction, x-xv. Catalogue, 3-25. Punch-marked Billon Coins, xiv-xv. 22-24, 45. Punch-marked Copper Coins, xv. 24-25. Punch-marked Silver Coins, x-xiv. 3-21. Purānas, coins, xi. Satamānas, viii. Sigloi, Siglos, vii-viii. Signati argenti, x. Taxila, local coins of, xviii. 42-43. Uninscribed Cast Gopper Coins, Introduction, xwi-xvii. Catalogue, 26-40.

Yaudheyas, coins of, xviii. 43-44.







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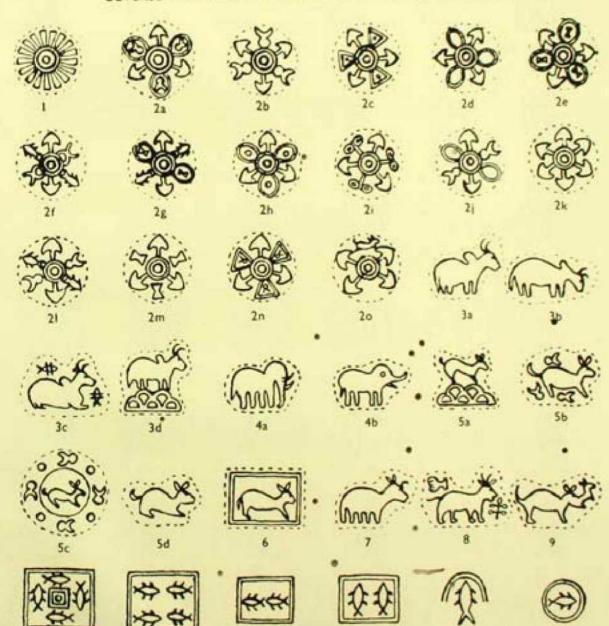
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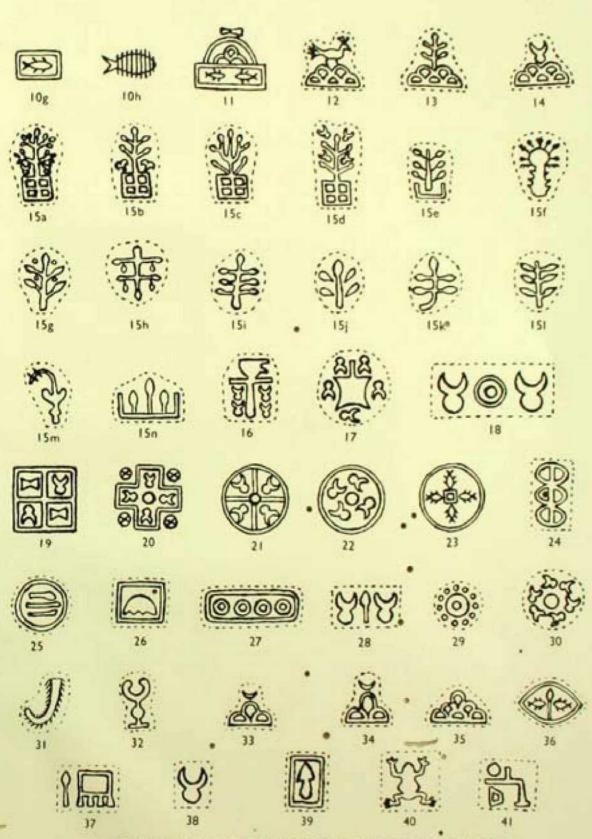


OBVERSE MARKS ON THE EARLY SINGLE TYPE SILVER COINS



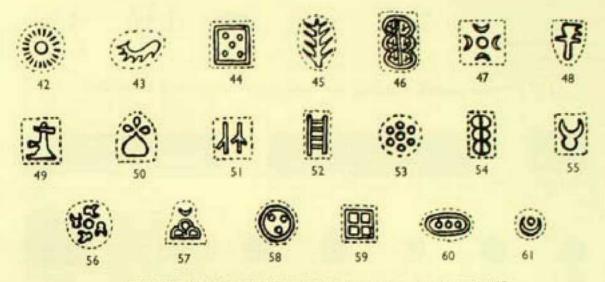
OBVERSE MARKS ON THE PUNCH-MARKED SILVER COINS



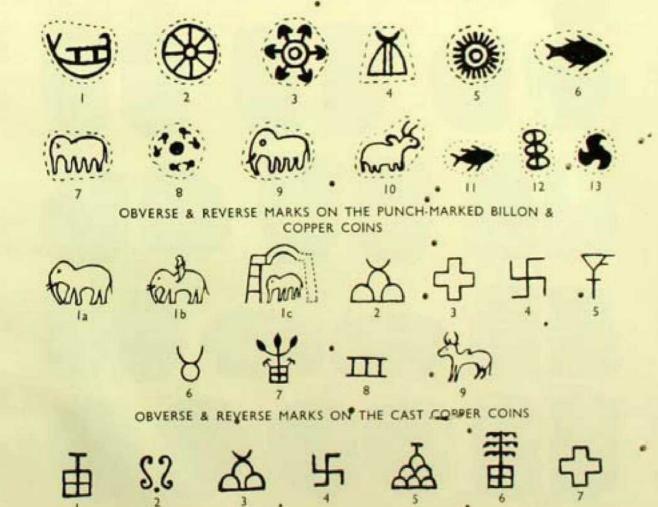


OBVERSE MARKS ON THE PUNCH-MARKED SILVER COINS

PLATE III



REVERSE MARKS ON THE PUNCH-MARKED SILVER COINS



OBVERSE & REVERSE MARKS ON THE LOCAL & TRIBAL COINS



PLATE IV













OBVERSE & REVERSE MARKS ON THE LOCAL & TRIBAL COINS













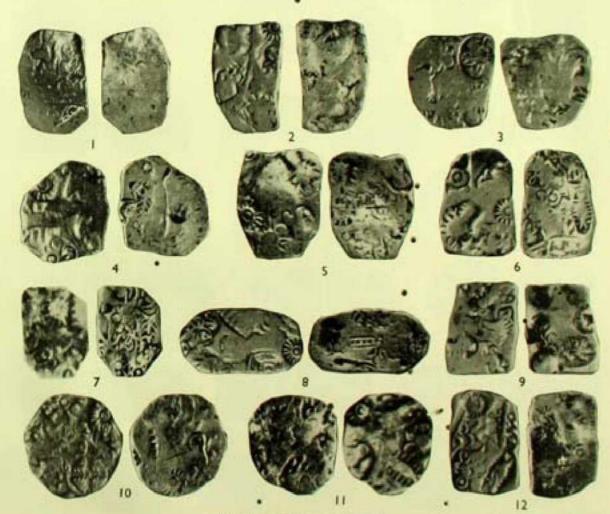








EARLY SINGLE TYPE SILVER COINS-BENT-BARS & MINUTE SILVERS



PUNCH-MARKED SILVER COINS .

PLATE V

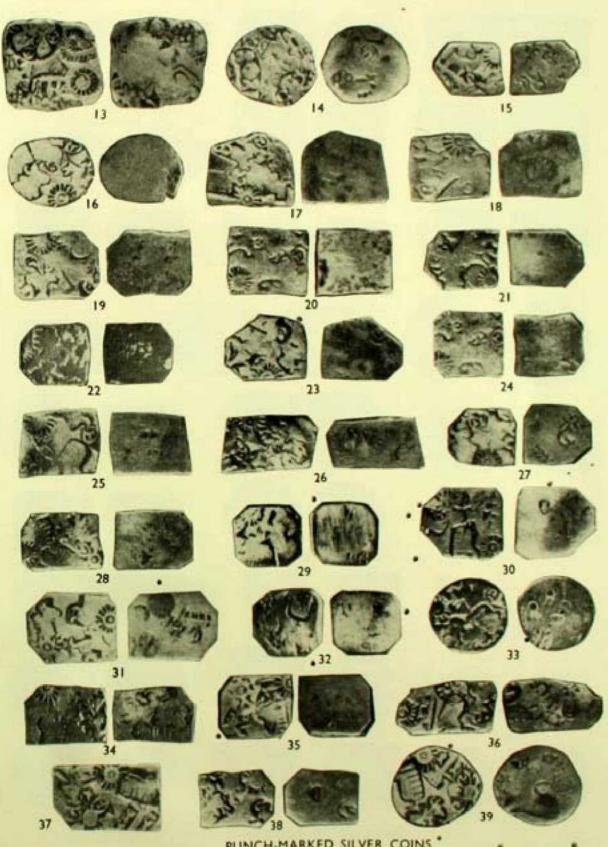


PLATE VI

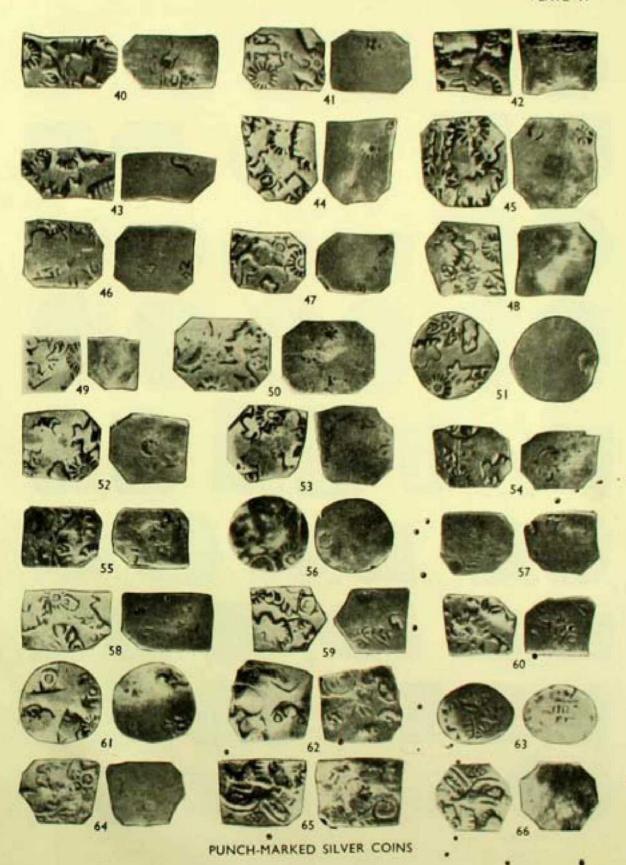
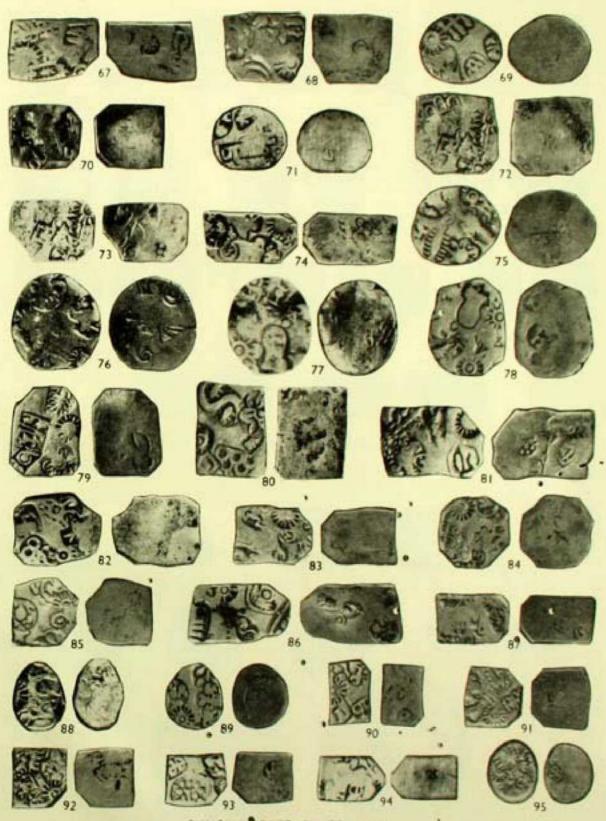


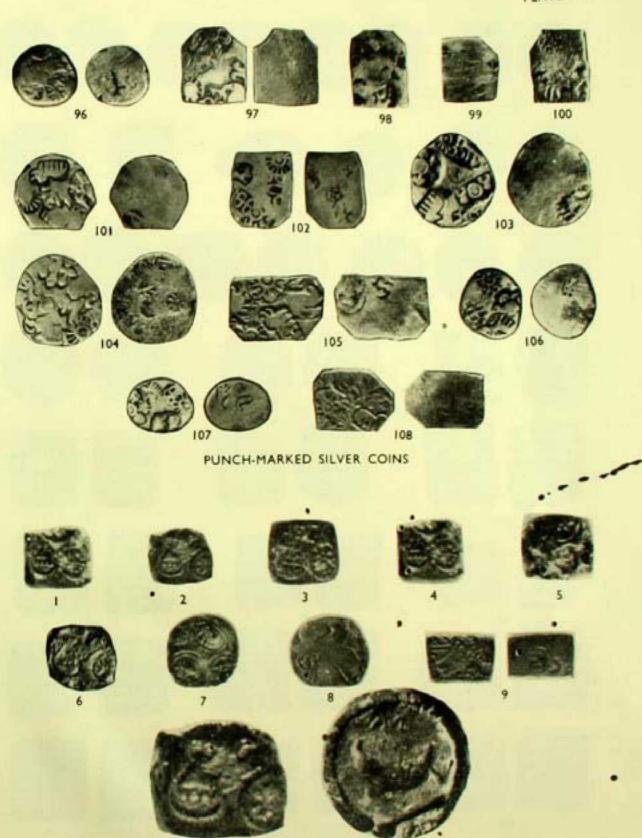
PLATE VII



PUNCH MARKED SILVER COINS

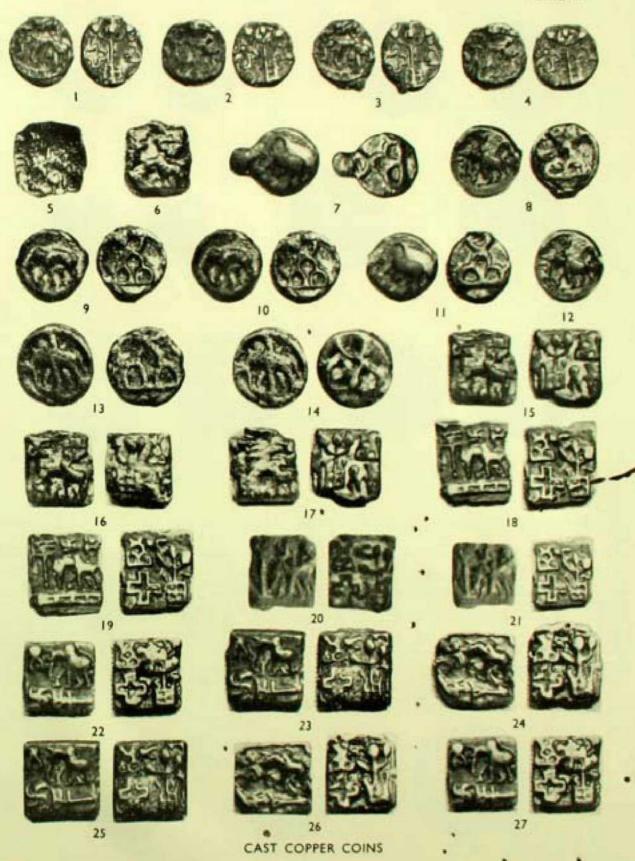


PLATE VIII



PUNCH MARKED BILLON & COPPER COINS & ENLARGED PHOTOGRAPHS OF A SHIP TYPE BILLON COIN & A TERRACOTTA SEALING FROM CHANDRAKETUGAR

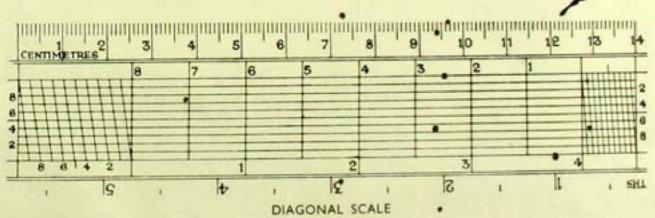
PLATE IX



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PLATE X











ADDITION-SHIP TYPE PUNCHMARKED BILLION COINS